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ABSTRACT

A study examining the relationship between the importance of instructional goals and instructor use of instructional strategies based on the five stages of group development (orientation, norm development, conflict, productivity, and termination) is reported. Instructional design is concerned with prescribing methods of instruction based on objectives, subject matter, and process. To determine a relationship between goals and strategies, two questionnaires (for teachers and students) were developed. Both had 10 statements on instructional goals and 24 on instructional strategies. They were completed by 54 college instructors and the students in each of their classes in seven liberal arts colleges in northeastern Ohio. The main purpose was to determine if a relationship existed between instructional goals and instructional strategies based on the stages of group development. The positive correlations indicated that goals and strategies varied in the same direction. The lack of relationships between subject matter mastery goals and strategies may be due to the goal statements used and the fact that college instructors do not use group process strategies to achieve subject matter mastery goals. There seems to be a lack of internal consistency for the goal statements which limits the use of the statements for other studies. Study results provide a rationale for development of a taxonomy for events of instruction that relate goals and strategies. Instructional design should identify ideas from other models of curriculum and instruction. Contains 31 references.(SM)

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A STUDY OF INSTRUCTOR GOALS, STRATEGIES AND STAGES OF GROUP DEVELOPMENT

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Introduction

This study examines the question, "How do college teachers utilize group process their classrooms? Do instructional systems accurately portray the actual behavior of these teachers? Do classrooms in higher education experience the stages of group development described in the literature?"

Classic instructional systems theory contains content, process and purpose. Much instructional design literature looks at purpose and content, but ignores process, while emphasizing instructional strategies. Where process has been examined(Gagne & Briggs, 1979; Romiszowski, 1981) issues such as group size were examined in contrast to viewing the teaching learning setting as a group phenomenon.

By viewing the class, teacher and students, as a group, the interactions of same can be examined as group process dynamics and as potential components of instructional design. The literature provides further clarification of this position.

Application of methods based on group process is found(Schmuck & Schmuck, 1979; Stanford, 1977). However, no integration of methods of instruction based on group process exists in instructional design. Briggs(1982a) stated that most systems models pay more attention to instructional material than to group process. The interest of instructional design in materials and media and an effort to change

the teacher from information giver to information manager resulted in instructional design failing to analyze the role of the teacher and group process. Instructional design failed to learn from other teaching and curriculum models. For example, Sergiovanni and Staratt(1971) described an instructional design model consistent with process and product concerns. Tubbs(1978) presented a model of a systems approach to small group interactions, a type of small group instructional design. Glaser(1982) anticipated the development of a macro-theory of teaching and instruction that includes patterns of teacher-student interactions.

This study investigated one group process variable-the stages of group development. The relationship studied was between the importance of instructional goals(objectives) and instructor use of instructional strategies based on the five stages of group development(Tuckman & Jensen, 1977). These stages are orientation, norm development, conflict, productivity and termination.

Theoretical Perspectives

Instructional design is concerned with prescribing methods of instruction based on objectives(purpose), subject matter(content) and process(interactions of teacher and students). Methods of instruction based on objectives and subject matter are incorporated into instructional design theory. For example, the events of instruction

explained by Gagne and Briggs(1979) suggested a sequence of instructional strategies related to cognitive processing. Methods of instruction based on process are not an integral part of instructional design theory. One field of study that looks at the interactions of teacher and students is group process. Since most education takes place in group settings, group impact and the influence of members can be a powerful force in supporting the learning process(Bradford cited in Schmuck, 1977). Briggs(1982a & b) suggested that instructional design has prescribed few methods of instruction based on group process.

The literature, in instructional design specifically and the educational field generally, recognizes the importance of including group process concerns into the design of instruction(Briggs, 1982a; 1982b; Hare, 1976; Hough & Duncan, 1970; Schmuck & Schmuck, 1979). Others have made concrete suggestions as to how this can be accomplished by the teacher(Schmuck & Schmuck, 1979; Stanford, 1977).

Koehler(1978) proposed that research should attempt to determine teaching processes in relation to outcomes. Bobbitt-Nolen(1987) looked at the relationship between goals and learning strategies. A relationship between one type of learning strategy and what can be described as a subject matter mastery goal was discovered.

Gropper's(1983) model of instruction quantified the conditions of learning to make reaching an objective easy. Andrews and Goodson(1980) presented 14 common tasks of instructional design. One task is the formulation of instructional strategies to match subject matter and learner requirements. Learner requirements may be related

to the individual learner and also might be related to groups of learners. Menges and McGaghie(1974) contributed to theory building by providing a taxonomy for interpersonal learning outcomes. Gagne and Briggs(1979), Dick and Carey(1978) and Romiszowski(1981) based instructional decisions on group size. For example, Romiszowski suggested that objectives, content, study habits and the skill and knowledge of learners influence the size of the group; large(over 50 members or 20 to 50 members) and small groups(5 to 20 members or 1 to 5 members). Romiszowski(1981) believes the question for instructional designers is not if to use group methods but when. He further stated that group environment opportunities provide for an increase in learning activities. Learning activities may be initiated by the teacher or student and includes experiences of the learners and teacher or restatement of what students learned during the lesson. Romiszowski not only used group size to suggest methods of teaching but also discussed interaction patterns as being important in making decision about group methods. Instructional design should provide a choice of instructional methods(Reigeluth & Merrill, 1979; Dick & Carey, 1978) to meet specific goals and content.

Stiltner(1973) studied the effect of teacher interventions in a junior high school class. Teacher interventions were based on the five stages of group development. The results of her study indicated that the junior high school class does not become a productive work group unless these interventions are made.

Researchers have suggested studies that investigate relationships between goals and strategies and the use of instructional strategies

based on groups in the development of instructional design theory. One group variable that has been applied to the classroom by the use of instructional strategies is stages of group development. Attempts to use stages of group development as a basis for suggesting instructional strategies have been suggested by Schmuck and Schmuck(1979) and Stanford(1977). Also, instructional design has used group size primarily as the basis for suggesting instructional strategies related to group process(Romiszowski, 1981; Gagne & Briggs, 1979; Dick & Carey, 1978).

The stages of group development deal with task and social concerns of the group. The stages are: orientation, norm development, conflict, productivity and termination. The orientation stage is concerned with information seeking, getting acquainted, and establishing trust. During norm establishment the members of a class organize into an effective learning team and include development of responsibility, responding to others and confronting problems. During conflict, norms that have been established are tested. No matter what the teacher does, the students think the teacher is wrong. During productivity, the classroom group becomes a working unit and work together to accomplish tasks. They have learned to deal with conflict and disagreement in constructive ways. In the termination stage, individuals begin to withdraw physically and emotionally and there is a break down of group skills and lethargy develops. Stanford suggested that strategies teachers use in the classroom have an effect on how successfully a classroom passes through the stages of group development and how effectively students learn content.

Method and Sample

To determine a relationship between goals and strategies, two questionnaires(one for teachers, one for students) were developed and piloted to produce the final form. Both questionnaires included ten statements about instructional goals and twenty-four statements about instructional strategies. The ten instructional goal statements were based on the IDEA System(Cashin & Perrin, 1978). The twenty-four instructional strategy statements were based on the work of Stanford(1977) and Cashin and Perrin(1978) but were combined for this study by the researcher(see charts on following pages). One questionnaire was distributed to the teacher; the other to students. Questionnaires were distributed to 64 college instructors and one each of their classes in seven liberal arts colleges in Northeastern Ohio. Of the 64 sets of questionnaires that were distributed, 54 sets were returned(1016 total surveys). The data analyses included Pearson Correlations between goal and strategy statements, Cronbach's Alpha test for reliability on the goal and strategy statements, t-tests and chi-squares and cross tabulations on instructor group vs non-group orientation and use of strategies.

Cronbach's alpha was calculated for goal and strategy statements for both students and instructors. Reliability scores indicated a high reliability for the strategy statements(r=.93); a moderately high reliability(r=.63) for the goal statements.

The goal statements were taken directly from the IDEA System.

Reliability scores have not been calculated on these statements. Changes in the statements have been made in the statements based on instructor experience and suggestions for additional objectives(Hoyt & Cashin, 1977). The reliability scores indicate the goal statements need further refinement. Therefore, the goal statements did not adequately describe the possible instructional goals of college instructors.

INSTRUCTIONAL GOALS

Subject Matter Mastery
- gaining factual knowledge
- learning fundamental principles, generalizations or theories
- developing skills, competencies and points of view needed by professionals in the field
- learning how professionals in the field gain new knowledge

Development of General Skills
- learning to apply course material to improve rational thinking
- developing creative capacities
- developing skill in expressing one's self orally and in writing

Personal Development
- developing a sense of personal responsibility
- gaining a broader understanding of intellectual-cultural activity
- discovering implications of the course material for understanding myself

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INSTRUCTIONAL STRATEGIES

Orientation

- explain what students can expect will happen in class
- provide opportunity in the classroom for students to get acquainted with me
- provide opportunity in the classroom for students to get acquainted with each other
- model the behavior expected
- provide opportunity during class time for students to ask questions

Norm Development

- use group centered activities rather than teacher centered activities; for example presentations by groups of students to the class
- involve students in setting goals
- arrange seating so students can see and hear each other
- have students role play in class to rehearse skills they have been taught
- structure learning experience where students must work together
- encourage students to cooperate by suggesting ways they can work together
- structure assignments so students have an opportunity to make group decisions

Conflict

- observe the class and describe problem behavior to help identify problems that may inhibit the class from working together
- describe specific ways, including examples, students can improve their work or ability to work together
- accept student criticism as part of behavior students demonstrate as way to solve problems
- respond to feelings underlying students words

Productivity

- help the students become reacquainted after periods of vacation or interruptions
- help the students work on learning tasks and on socio-emotional concerns by providing learning activities that personal concerns with content
- encourage students to get involved in projects outside the classroom
- use short term discussion groups

Termination

- at the end of the semester, encourage students to express feelings about the end of the class.
- review at the end of the semester to help students analyze and understand the impact the class has had on them
- tie up loose ends and provide students the opportunity to clear up unfinished business at the end of the semester
- discuss with students ways in which they can use the skills and knowledge acquired in this class in future classes

The strategy statements were developed for this study and based on the work of Stanford(1977) and Schmuck and Schmuck(1979). A pilot study further refined the choice of strategies for the main study. Results indicated that the literature from which these strategies were chosen are consistent with the results of this study.

Results and Discussion

Group Process Strategies Not Used for Subject Matter Mastery

The main purpose was to determine if a relationship existed between instructional goals and instructional strategies based on the five stages of group development. Goals that were described as focusing personal development and general skills development showed a correlation with seventeen of the strategies based on the five stages of group development. The strategies were those related to norm development and dealt primarily with student feelings and social concerns.

The positive correlations indicated that goals and strategies varied in the same direction. Instructors who rated the goal to be important rated the strategy as being used frequently. If the goal was rated as unimportant, the strategy was rated as not being frequently used. Instructors rated goals of subject matter mastery to be of highest importance, but did not indicate frequent use of instructional strategies based on the five stages of group development

to achieve subject matter mastery goals.

The lack of relationships between subject matter mastery goals and strategies may be due to the goal statements used. The goal statements were not behaviorally stated and were general enough to allow personal interpretation of meaning.

A lack of relationship between subject matter mastery goals and strategies may also be explained by college instructors not using group process strategies to achieve subject matter mastery goals. College instructors indicated that subject matter mastery goals are most important. Through past teaching experience or lack of knowledge about group process strategies, college instructors use other teaching strategies, like lecture, to achieve subject matter mastery goals.

Results for the Four Subject Matter Mastery Goals

"To develop specific skills" was the only subject matter mastery goal to show a positive significant correlation with "students role play in the classroom to rehearse skills that have been taught." This relationship may be a result of the wording of the goal and strategy statements; the word skill appeared in both and was the only use of the word in a strategy or a goal statement. This association between goal and strategy may be a function of language rather than intention of the instructor to achieve a specific goal by use of a strategy.

Since college instructors rank subject matter mastery goals as most important for student achievement. Role playing may be seen as a way to practice knowledge and skills learned in the class. Role

playing is used by college instructors to teach content, not as a process.

"To learn fundamental principles, generalizations or theories" was ranked as the most important goal by faculty, but was not correlated with any strategies. College instructors are not using strategies related to group development to achieve their most important goal. Tradition suggests that lecture is used by most college instructors. The lecture method may be the only strategy with which they are familiar. Reviews of teaching methods(Gall & Gall, 1976; McLeish, 1976) indicate choice of method is determined by the objective and that a variety of teaching methods may be appropriate. College instructors receive little training in teaching and as teaching graduate assistants, they imitate teaching strategies. College instructors may not be aware of other possibilities. Creativity in the classroom is usually not rewarded and using lecture takes less time than using group related strategies. Giving information in the role of teacher seems safer; the instructor thinks the goal is more likely to be achieved rather than relying on the energy and strength of the group. College instructors apparently see student cognitive development as separate from student personal development. College instructors also feel threatened in using these strategies because this type of instruction reveals the self and instructors lose some control over the classroom.

"To learn how professionals in the field go about the process of gaining new knowledge" was rated lowest in importance by faculty and was not related to any strategy. College instructors do not set as a

high priority connecting classroom learning with student professional development. This viewpoint supports the traditional role of college learning, learning for the sake of learning. The traditional viewpoint also ignores important reasons why students are in college, career opportunities. College instructors do not believe this reason for learning is important despite increasing numbers of non-traditional students(adult learners, not the 18-22 year old who went directly to college from high school), students who bring much experience and expertise into the classroom. The role of teacher remains as information giver. This result may also be due to the sample for this study; students were traditional. College instructors in the institutions volunteering for this study may not have much experience in teaching non-traditional students.

"To gain factual knowledge" was the only goal to show a negative correlation with a strategy "I help students become reacquainted and adjusted to the classroom environment after periods of vacation or interruption." College instructors indicate an inverse relationship between achieving this subject matter mastery goal and student personal concerns. The literature suggests(Runkel, et al, 1971; Stiltner, 1973; Gorman, 1974) process needs to be dealt with before effective content communication can take place. College instructors are either not aware of the relationship between effective content learning and process or do not accept the opinion of experts.

Summary

Instructors who use strategies based on the five stages of group development use them to achieve goals related to personal development rather than subject matter mastery. The literature suggests that group development strategies can be used to achieve task concerns(Schmuck & Schmuck, 1979) and that students who participate in group experiences are better at critical thinking(Beach, 1970). Results from this study indicated that instructors who are using strategies based on the stages of group development are not using the strategies to achieve task concerns, but rather social concerns. Instructors seem to view the strategies based on the stages of group development to be related to personal or emotional concerns of students and not cognitive development of the student. As the literature suggested, the choice of one's method seems to depend on one's goals(McKeachie, 1963; Gall & Gall, 1976; McLeish, 1976). This study results may be due to a misunderstanding about the use of group development strategies, the misconception that group development deals with feelings rather than both feelings and content or a lack of training in various teaching methods.

Stiltner's study suggested that teachers need to make interventions in the classroom to help the class develop through the stages of group development and deal with issues of conflict. Instructors in this study emphasized subject matter mastery but do not use group oriented teaching strategies to help the students develop through the stages. As Stiltner suggested, learning content is less

effective when the instructor does not help the class deal with group process issues.

This study did not assess student achievement and was not looking for a relationship between the use of strategies based on the stages of group development and student achievement. By comparison, this study was interested in focusing on description of the use that faculty in colleges are currently making of particular instructional strategy in relation to instructional goals.

The results of this study show a lack of internal consistency for these goal statements. This limits the use of these statements for other studies and also influences the interpretation of results of this study. As the follow-up interviews for the pilot study indicate, there is some confusion by respondents in understanding the language used. Further research needs to be done to develop goal statements with higher reliability.

Group vs. Non-Group Oriented Instructors

Group oriented instructors do use two strategies that deal with student personal concerns or feelings. However, they are not using group strategies to achieve subject matter mastery. Although they identified themselves as group oriented, based on their uses of strategies, they do not seem aware that strategies based on the stages of group development can be used to teach content. They identify a

group oriented instructor as one who is concerned with personal feelings of the student. Most instructors consider themselves to be interested in student personal concerns. Also, only two strategies were used more frequently by group oriented instructors. One would expect more use of more of the strategies since they identified themselves as group oriented.

College instructors do not understand the use of strategies related to group development. This may be due to lack of training or a misunderstanding about group teaching strategies. Group strategies based on the stages of group development can be used if the class is divided into small work groups, but the strategies can also be used if the class as a whole is thought of as a work group. Group does not have to imply individual work groups, but can also be applied to the class as a whole. Perhaps the influence of the popular press and the emphasis on groups for consciousness raising and encounter has made them unaware of the role work groups can play in the classroom. Groups have been portrayed as divisions of a larger group and the large group has not been portrayed as a group by itself.

As the literature suggested(Schmuck & Schmuck, 1979; Stanford, 1977), teachers use strategies related to orientation and norm development. Teachers are less likely to use strategies that deal with conflict and therefore the classroom group does not become as productive as it might. The results of this study support this idea. Both group and non-group oriented instructors used orientation and norm development strategies but were less likely to use strategies related to conflict. No differences were found between group or

non-group oriented instructors in their use of instructional strategies based on the stages of group development. This lack of difference may be due to several factors. The question used to place faculty in one group or the other was not useful in accepting or rejecting this hypothesis. The questionnaire asked faculty to identify a variety of methods they use in the classroom. The questionnaire also should have asked the instructors why they use group methods. Faculty see themselves as group oriented if they are concerned with personal needs of students. The stages of group development indicate that group oriented instruction is more than being concerned with the personal needs of students. Group oriented instruction also is concerned with the process of learning in the classroom.

Although group oriented instructors use strategies related to student feelings and personal concerns, they do not rate goals that are related to personal needs of the student any differently than non-group oriented instructors. Instructors do not report an association between strategies related to student feeling and goals related to student feelings. The wording of the goal statements may not have been clear. More likely, the method used to place instructors into group oriented or non-group oriented did not sufficiently distinguish one group from the other. Therefore, acceptance or rejection of this hypothesis does not contribute to understanding the differences between group and non-group oriented instructors and their use of strategies.

These results may indicate that group oriented instructors are

more aware of the personal needs of students and would like to think they are teaching with those needs in mind. But, strategies that would achieve this are not being used in the classroom. Instructors seem to be saying one thing and doing another. Also, instructors may not have interpreted the strategies listed on the questionnaire as useful. Other strategies related to group orientation may be used.

Conclusions

Results of this study provide a rationale for development of a taxonomy for events of instruction that relate goals and strategies. Events of instruction have been proposed by Gagne and Briggs(1979) based on cognitive processing theory. These events of instruction are based on the internal thoughts of students. Events of instruction can also reflect group process theory by suggesting instructional strategies based on stages of group development. Both ideas base events of instruction on sequencing and successful achievement at one level to succeed at the next. The difference is one of emphasis: internal(individual) or external(group) processes. Both types of processes exist in the classroom and both should be explicitly planned for. Differences in the use of strategies seem to be more significantly related to the importance one places on goals than to subject matter. The literature supports this result(Beach, 1970; Gall & Gall, 1977; McKeachie, 1963; McLeish, 1976; Henson, 1980; Koehler,

1978).

Instructors who identified themselves as group oriented were expected to use strategies based on the stages of group development more frequently than instructors who identified themselves as non-group oriented. This was not supported by the data. No significant difference in the use of strategies by group and non-group oriented instructors was found. Instructors in the sample were not using these strategies as often as might be expected and were not using these strategies to teach subject matter mastery goals. The lack of use of these strategies to teach subject matter mastery goals was a consistent finding in this study. Faculty are not aware or not convinced that strategies based on the stages of group development can be used to achieve subject matter mastery.

Doyle(1979) stated that teachers and students affect each other. Bradford(cited in Schmuck, 1979) stated that groups are at the heart of the learning process. Gagne and Briggs(1979) suggested that most learning takes place with learners assembled in groups. Results of this study indicate that college instructors are not fully using the potential of the group to achieve subject matter mastery. The classroom learning/teaching experience is limited by lack of knowledge or understanding by college instructors about group development. Effective group instruction clearly is related to more than class size or having students feel good about themselves. Group instruction has to do with using the available resources in the classroom to reach the full potential of both teacher and students. Use of strategies based on the stages of group development is one way to begin to achieve

this.

Teacher education programs should emphasize the relationship between goals and strategies in planning, implementing and evaluating instruction to help use the full potential of teachers and students. Results of this study indicate that in practice subject matter and class level are not as influential in determining instructional strategies as are instructional goals. The use of group process for teaching content as well as the importance of process for feedback, should be included in teacher development programs. If a link between use of group process skills and student achievement or ratings of effective teaching are discovered, teachers need to be made aware of the importance of interpersonal skills as requisite for effective instruction.

Instructional design should identify ideas from other models of curriculum and instruction. Group process is one such area. Instructional design should look at other areas of group process that this study did not investigate and look to other fields.

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